


# EMPOWERING YOUNG WOMEN FROM CENTRAL ASIA WITH A SCIENTIFIC COMMUNICATION PROGRAM: "ADVENTURE OF SCIENCE: WOMEN AND GLACIERS IN CENTRAL ASIA"

H. Weber, A. Volery A., A. Mederbek, D. Kim, P. Immanalieva, M. Barandun

11th LISSIG EARSeL Workshop Bern, 08.02.2023

"Adventure of Science: Women and Glaciers in Central Asia" proposes tuition-free glaciological expeditions to young women* from Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan. Empowering young women* through sience, art, and outdoor exploration.




INSPIRING GIRLS EXPEDITIONS

Adventure of Science
WOMEN AND GLACIERS IN CENTRAL ASIA





Martina and Marlène from Unifr

## INSPIRING GIRLS* EXPEDITIONS

Inspiring Girls* Expeditions is a collaborative and international partnership of branches hosted by different universities and nonprofit organizations.

### GLOBAL BRANCHES

| Girls* on Ice Canada | Inspiring Girls* Expeditions Alaska | Girls* on Rock | Inspiring Girls* Expeditions OSU | Girls* on Ice Switzerland | Girls* on Ice Austria | Adventure of Science | Girls* on Aotearoa / New Zealand |
|---|---|---|---|---|---|---|---|
| *Alpine Club of Canada* | *University of Alaska Fairbanks* | *Univeristy of Colorado Boulder* | *Oregon State Univeristy (OSU)* | *Paul Scherrer Institute* | *University of Innsbruck* | *University of Fribourg* | *Victoria University of Wellington* |
| Girls* on Ice Illecillewaet | Girls* on Ice Alaska | Girls* on Rock | Girls* on Ice Cascades | Girls* on Ice Schweiz | Girls* on Ice Austria | Adventure of Science: Women & Glaciers in Central Asia | Girls* on Ice Aotearoa / New Zealand |
| Girls* on Ice Kootenays | Girls* in the Forest | | Girls* in Icy Fjords | Girls* on Ice Suisse | | | |
| Girls* on Ice Yukon | Girls* on Water | | Expeditions@Home | | | | |

** Inspiring Girls* Expeditions welcomes cisgender girls and transgender, agender, Two Spirit, nonbinary, intersex, and genderqueer youth.*

https://www.inspiringgirls.org

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## "Adventure of Science Goals"

1. Empowering young women through science and wilderness exploration.

2. Supporting young women to proceed as environmental scientists to increase gender balance within the scientific community in Central Asia.

3. Encouraging National Universities to include young female scientists into academic activities and research

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## Support

CICADA
Cryospheric Climate Services for Improved Adaptation
(2017-2021)

CROMO-ADAPT
Cryospheric Observation and Modelling for improved Adaptation in Central Asia
(2022-2025)

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

unesco
United Nations Educational, Scientific and Cultural Organization

CAIAG

PAMIR

https://www.inspiringgirls.org

# “Adventure of Science” so far

Online Symposium

First expedition in Ala-Archa National Park, Kyrgyzstan

AoS@Home Program

Third expedition in Ala-Archa National Park, Kyrgyzstan

2019 2020 2021 2022 2023

AoS@Home Program

Second expedition in Ala-Archa National Park, Kyrgyzstan

Online Symposium

Online Symposium







Salzburg (Austria), 6-8 July, 2021

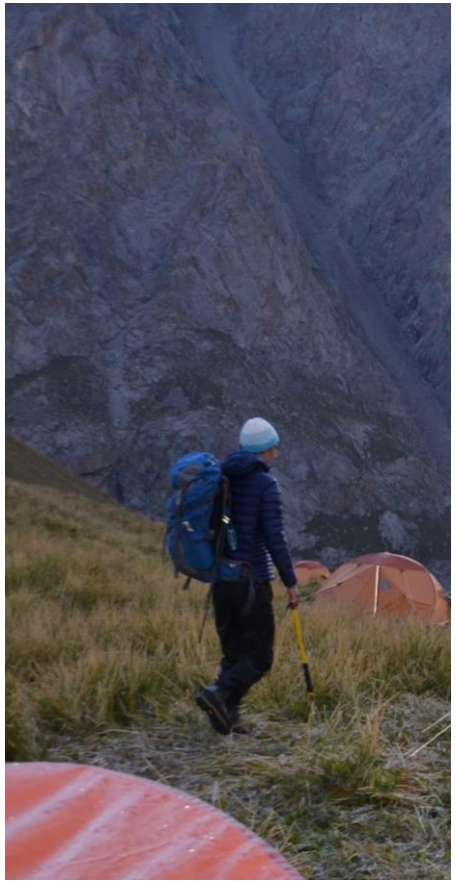
# Digital Earth technologies supporting global problems: empower women and girls in Science.

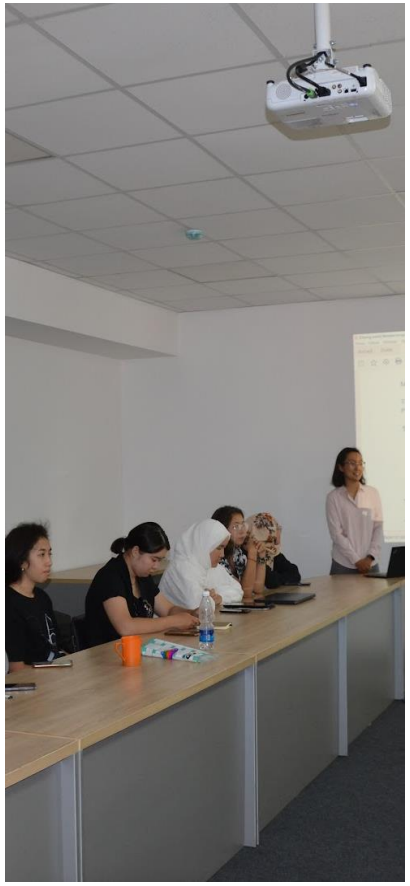


# What defines “Adventure of Science”?









A safe space provided by an “all women” Team

Teaching in Environmental science and Glaciology

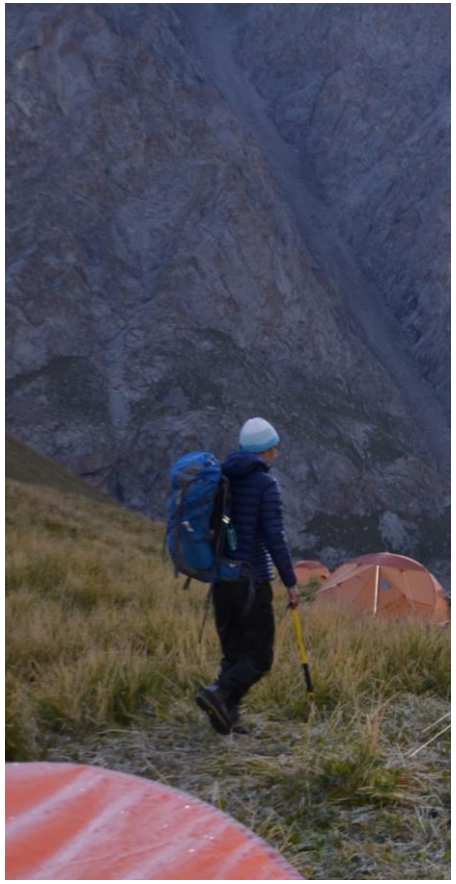
Acquisition of “outdoors” skills

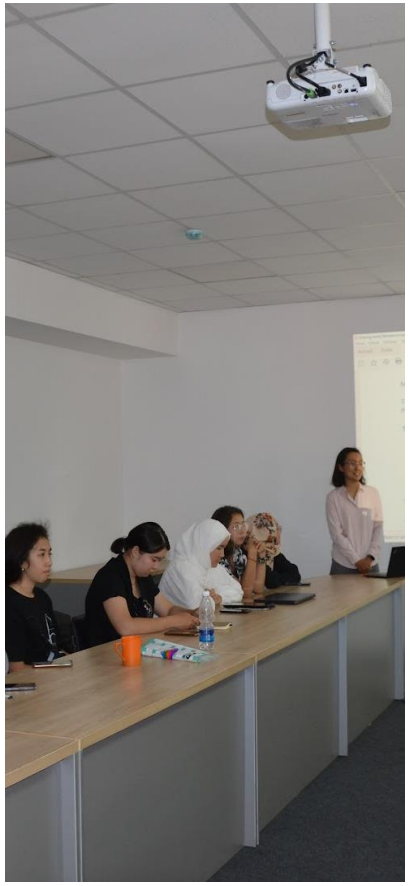
Post Expedition Mentorship Program

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# A safe space provided by an “all women” team

## An “all women” Team

1 mountain guide (KG)

6 instructors, From CA and CH

Several program coordinators, From CA and CH



TAMARA MATHYS

Glaciologist, Onsite Coordinator, Steering Committee Member



MARLENE KRONENBERG

Glaciologist, Founder and Co-director Adventure of Science



MARTINA BARANDUN

Glaciologist, Founder and Co-director Adventure of Science



DILOROM DJOLOLOVA

Adventure of Science Program Coordinator - Tajikistan



LAURA NIGGLI

Geographer, Instructor



SABRINA MUZAFARI

Adventure of Science 2022 Instructor, Adventure of Science Alumna



ANOUK VOLERY

Geography Student, Adventure of Science Instructor



DILARA KIM

Earth Observation Student, Adventure of Science Instructor 2022



PERIZAT IMANALIEVA

Adventure of Science Program Coordinator - Kyrgyzstan



MUHABBAT SODIKOVA

Adventure of Science Instructor - Uzbekistan



HELGA WEBER

Adventure of Science Instructor



CASSANDRA KOENIG

Adventure of Science Instructor



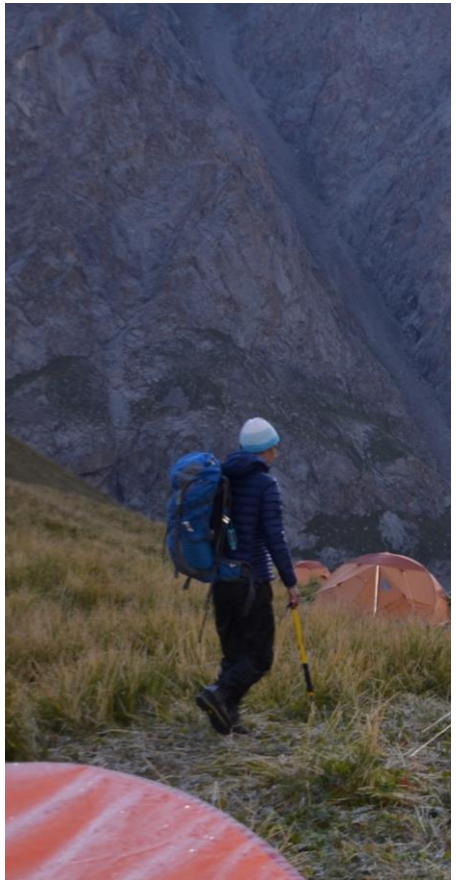
AIZIREK MEDERBEK KYZY

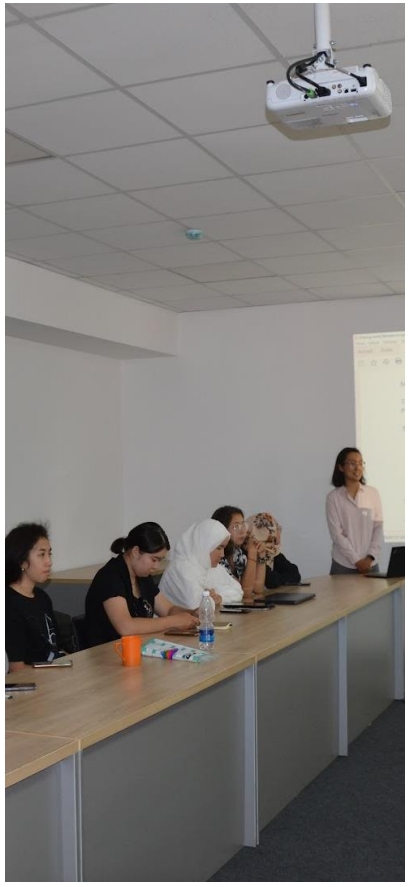
Adventure of Science Instructor 2022, Alumna

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# Teaching in environmental science and glaciology



## Modules

- glaciology, geomorphology, hydrology, climate change
- Art: observation and creative ways of delivering scientific results

## Teaching Approach

- hands-on field studies & inquiry-based teaching
- exchanging thoughts in open discussion







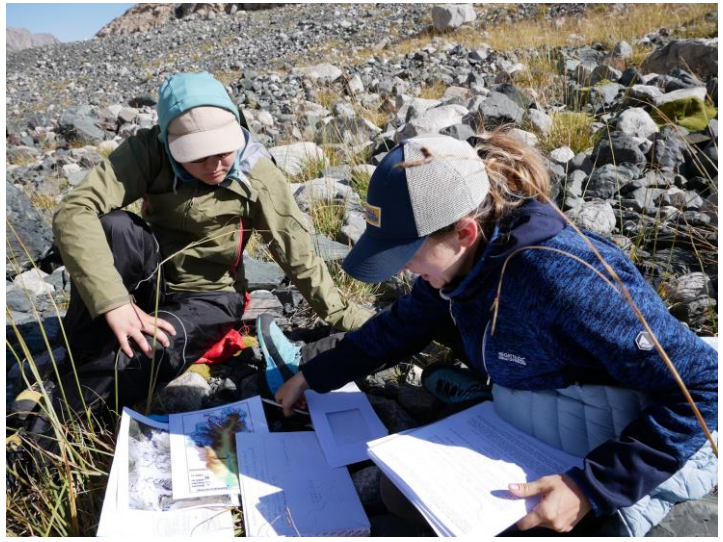
# Teaching in environmental science and glaciology



## Research projects:

- Planned and realized by participants (formulation of hypothesis, data measurements, data analysis)
- Presented during the Public Event and International Online Symposium

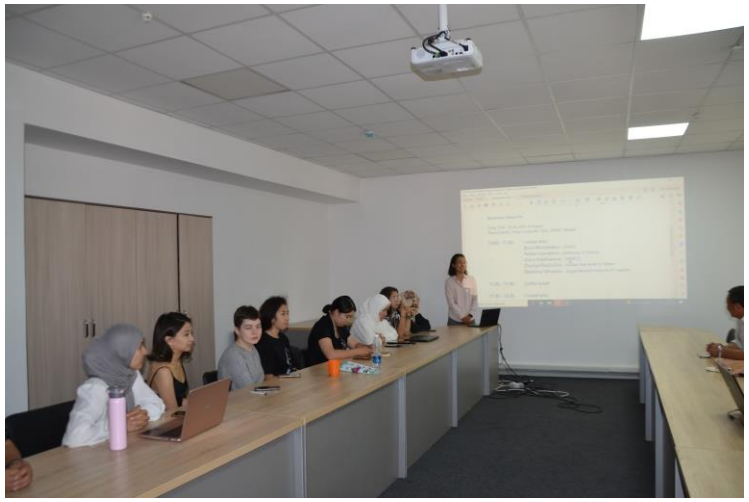


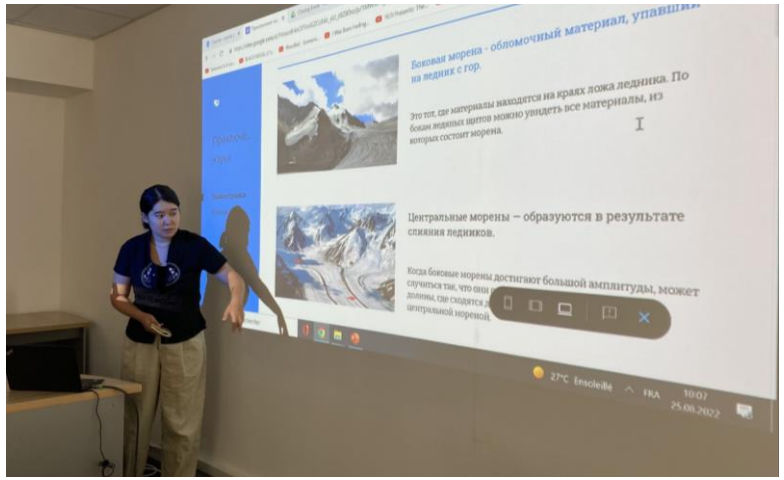


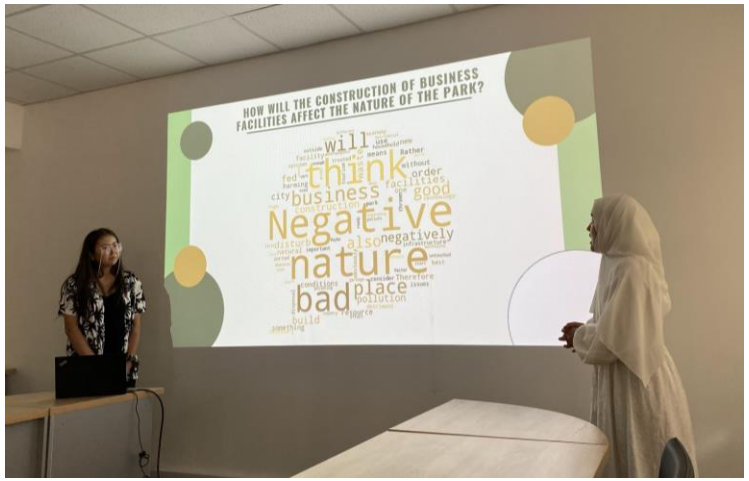


# Teaching in environmental science and glaciology





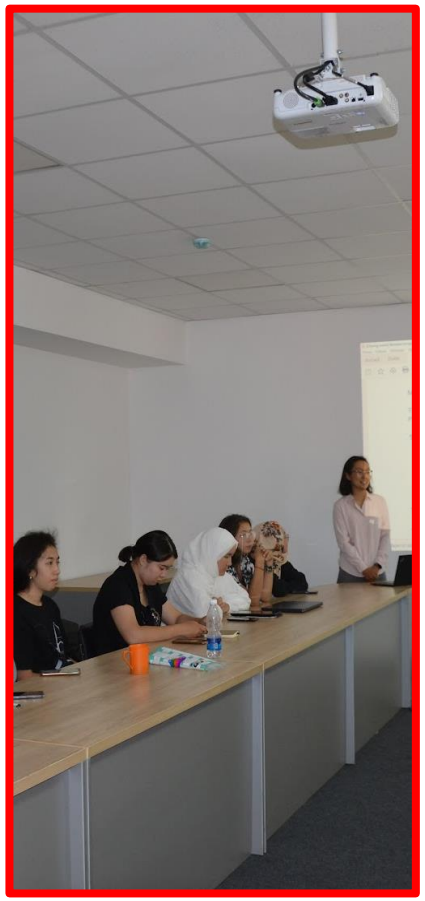

Public event in Bishkek, Kyrgyzstan.

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# International Science Symposium

## Online Symposium 2020, 2021, 2022

- Bridging thematic gaps and communities (network)
- 3 Topics + Participants project presentation
- International female experts
- Organized by AoS and UNESCO Almaty
- ~200 registered participants + live streaming via Facebook









# “Adventure of Science Goals”

**Long term Goal**

A sustainable program with a local organization and management of the project

- Involvement of female scientists from the countries of Central Asia as instructors and coordinators who are trained in mountaineering and teaching skills.
- Involvement of motivated past participants in the program
- Partnership and collaboration with local universities and institutions for the project to be anchored in Central Asia

➔Creation of a network of female Scientists throughout Central Asia who support, mentor, and encourage the next generations of researchers


Thank you for
your Attention!

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## Participants

- 10 Young Women (18-25)
- Equal participation from Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan and Turkmenistan.
- Scientific or Environmental Interest
- Diverse in term of Socio-economically Backgrounds, cultures, thematic interests

# Acquisition of outdoor skills









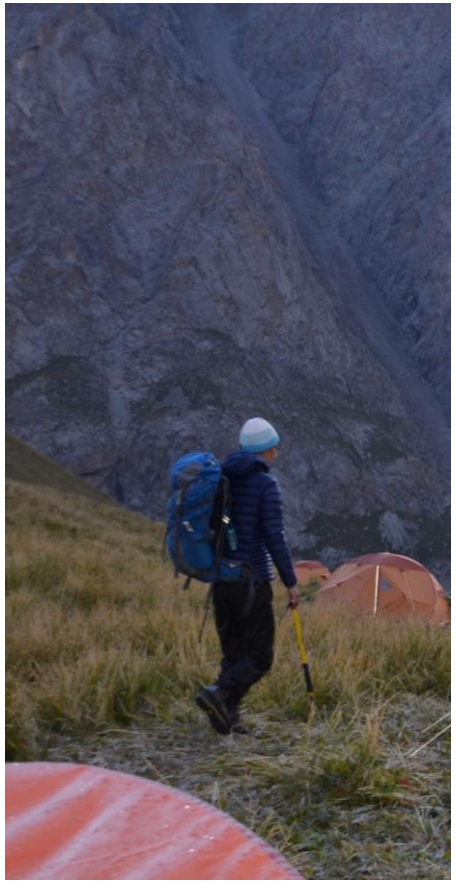


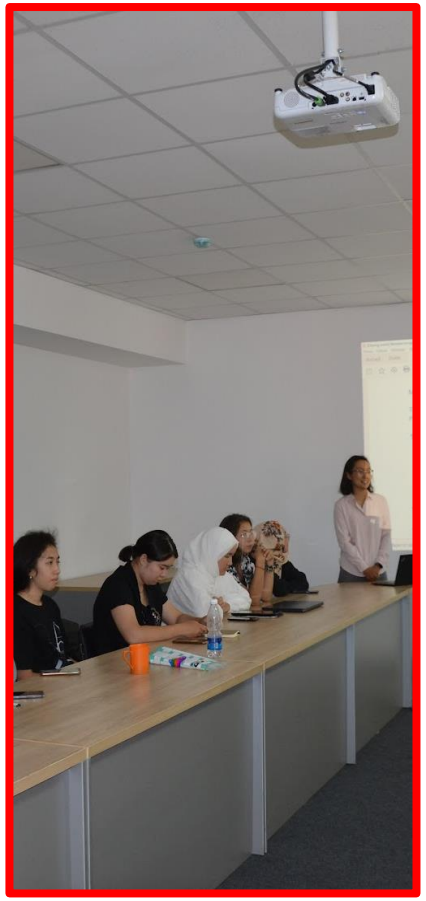


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